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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,260	04/17/2007	Ronald Bayer	AP 10835	1312

52203 7590 09/08/2009

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EXAMINER	
LICHTI, MATTHEW L	

ART UNIT	PAPER NUMBER
3663	

MAIL DATE	DELIVERY MODE
09/08/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/582,260	BAYER ET AL.	
	Examiner	Art Unit	
	Matthew Lichti	3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 April 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *19-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *19-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 June 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/13/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 23 is objected to because of the following informalities: There is no claim 23, the claim amendment filed June 9 2006 only has claims 19-22 and 24-35. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 33-35 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 33 recites "a device for identifying a driver using a measured steering torque against the at least one or more artificial steering stops". It is not clear from the specification how a driver can be identified by a steering torque or steering angle. It is also not clear what it means to be identified. For example, it could identify a specific person by name that has been preprogrammed in memory or just identify different types of drivers that may have different steering preferences..

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 19-31 and 33-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 19 recites the limitation "the steering torque regulating module". There is insufficient antecedent basis for this limitation in the claim. Claims 20-31 are rejected based on their dependency on claim 19.

7. Claim 19 also recites "an additional steering torque is applied". It is not clear what is applying the additional steering torque and what it is in addition to.

8. Regarding claim 26, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

9. Claims 33-35 are indefinite because it is not clear how a device identifies a driver using measured steering torque or steering angle.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 19-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Czekaj (U.S. Patent 5,742,141).

12. Claims 19-27 and 32-35 are replete with statements that are either essentially method limitations or statements of intended or desired use. For example, claim 1 recites "...for applying a steering...", "the parking aid cooperates...", and "an additional steering torque is applied...." These clauses, as well as other statements of intended use do not serve to patently distinguish the claimed structure over that of the reference, as long as the structure of the cited references is capable of performing the intended use. See In re Pearson, 181 USPQ 641; In re Yanush, 177 USPQ 705; In re Finsterwalder, 168 USPQ 530; In re Casey, 512 USPQ 235; In re Otto, 136 USPQ 458;

See also MPEP 2114 that states:

> A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647.
>
> Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531.
>
> [A]pparatus claims cover what a device is, not what a device does." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 15 USPQ2d 1525,1528.

As set forth in MPEP 2115, a recitation in a claim to the material or article worked upon does not serve to limit an apparatus claim.

13. Regarding claim 19, Czekaj discloses a parking aid for a motor vehicle having a vehicle steering with a manual steering wheel; the parking aid comprising:

a steering torque control module (figure 1, vehicle 10 equipped with semi-autonomous parking control system including computer 10 which increases and decreases the amount of steering torque required to steer while parking, col. 2, lines 21-36) for applying a steering torque to the steering wheel, wherein that the parking aid cooperates with the steering torque regulating module and an additional steering torque is applied to the steering wheel, supporting a driver of the vehicle in a parking procedure.

14. Regarding claim 20, Czekaj discloses that the additional steering torque applied to the steering wheel generates one or more artificial steering stops (abstract, figure 2, steps 36 and 38, col. 3, lines 20-34, additional steering torque is applied so that steering required the MAX steering effort when the driver is trying to steer outside the desired steering trajectory. This artificially stops the driver from steering outside of the desired trajectory unless they wish to apply a very large amount of steering torque).

15. Regarding claim 21, Czekaj discloses that the the driver is guided by the additional steering torque applied to the steering wheel during steering maneuvers in a parking procedure in a parking maneuver (abstract, figure 2, col. 3, lines, 20-50, torque is applied to increase or decrease the amount of effort required to steer).

16. Regarding claim 22, Czekaj discloses that the steering torque applied to the steering wheel is limited as a function of a steering work applied by the driver or a

quantity depending thereon (abstract, figure 2, col. 3, lines, 20-50, torque is applied to increase or decrease the amount of work required by the driver so it is a function of the work applied by the driver. When the driver applies steering work to steer outside or inside the trajectory, it influences the steering torque applied to make it easier or harder to steer, col. 2, line 66 – col. 3, line 19 calculates whether the driver's work is within the trajectory).

17. Regarding claim 24, Czekaj discloses that changes in restore torques of the steering applied as a function of the steering angle are determined and the additional steering torque is applied to the steering wheel, taking into account the changes in the restore torques by which a driver of the vehicle is supported during a parking maneuver (all changes in torques are taken into account to determine the trajectory error, whether trajectory error is increasing/decreasing, and whether steering effort is within the min and max ranges, col. 2, line 66 – col. 3, line 50).

18. Regarding claim 25, Czekaj discloses that the additional steering torque applied to the steering wheel generates two or more additional steering stops, and the driver is guided by the additional steering torque applied to the steering wheel during a steering maneuver in the parking procedure (col. 2, lines 20-40; fig. 2, steps 34, 36, 38, steering stops are applied whenever trajectory error is greater than the tolerance and not decreasing, therefor the system can provide 2 or more stops).

19. Regarding claim 26, Czekaj discloses that the steering torque applied to the steering wheel is limited as a function of a steering work applied by the driver or a quantity depending thereon (abstract, figure 2, col. 3, lines, 20-50, torque is applied to increase or decrease the amount of work required by the driver so it is a function of the work applied by the driver. When the driver applies steering work to steer outside or inside the trajectory, it influences the steering torque applied to make it easier or harder to steer, col. 2, line 66 – col. 3, line 19 calculates whether the driver's work is within the trajectory).

20. Regarding claim 27, Czekaj discloses that the steering assist torque is reduced in the event of a faster operation of the steering wheel or a quantity depending thereon such as greater rate of rotation of the steering wheel (col. 2, line 66 – col. 3, line 19 , steering torque assist depends on whether the driver is steering within the trajectory which is a function of how fast the driver is steering).

21. Regarding claim 32, Czekaj discloses a parking aid for a motor vehicle having a vehicle steering with a manual steering wheel, the parking aid comprising:

a device (figure 1, vehicle 10 equipped with semi-autonomous parking control system including computer 10 which increases and decreases the amount of steering torque required to steer while parking, col. 2, lines 21-36) for applying one or more steering stops to the manual steering wheel, wherein a driver is guided during steering maneuvers of a parking maneuver (abstract, figure 2, steps 36 and 38, col. 3, lines 20-

34, additional steering torque is applied so that steering required the MAX steering effort when the driver is trying to steer outside the desired steering trajectory. This artificially stops the driver from steering outside of the desired trajectory unless they wish to apply a very large amount of steering torque).

22. Regarding claim 33, Czekaj discloses a device for applying an additional torque to a steering wheel (figure 1, vehicle 10 equipped with semi-autonomous parking control system including computer 10 which increases and decreases the amount of steering torque required to steer while parking, col. 2, lines 21-36);

a device (figure 1, vehicle 10 equipped with semi-autonomous parking control system including computer 10) for applying one or more steering stops to the steering wheel using the additional torque applied to the steering wheel (abstract, figure 2, steps 36 and 38, col. 3, lines 20-34, additional steering torque is applied so that steering required the MAX steering effort when the driver is trying to steer outside the desired steering trajectory. This artificially stops the driver from steering outside of the desired trajectory unless they wish to apply a very large amount of steering torque); and

a device (figure 1, vehicle 10 equipped with semi-autonomous parking control system including computer 10) for identifying a driver using a measured steering torque against the at least one or more artificial steering stops (identifies whether driver is steering inside or outside the trajectory and whether the steering is causing the error to increase, identifies whether MAX torque is applied, identifies that a driver wishes to steer outside the desired trajectory by pushing against the stop, fig. 2, col. 2, lines 8-40).

23. Regarding claim 34, Czekaj discloses that the driver is identified by a measured steering angle within a rising steering torque of the one or more steering stops (trajectory error is based on the steering angle, col. 2, line 66 – col. 3, line 26).

24. Regarding claim 35, Czekaj discloses that the work required for a steering torque actuator is determined and a driver steering torque is determined on the basis of the work required by the steering torque actuator (torque/work based on MIN and MAX steering efforts, fig. 2, col. 3).

Claim Rejections - 35 USC § 103

25. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

26. Claims 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Czekaj (U.S. Patent 5,742,141) in view of Shyu et al. 4931930.

27. Regarding claim 28, Czakaj does not particularly disclose the details of a longitudinal dynamics control module.

Shyu et al. teach a parking aid with a longitudinal dynamics control module (microprocessor 1) for controlling a speed of the vehicle in maneuvering into a parking

space by automatic braking intervention (brake actuator 45) measures as a function of a position of an accelerator pedal (accelerator actuator 44) of the motor vehicle (Col. 8 line 49 – col. 9, line 11)

It would have been obvious to one of ordinary skill at the time the invention was made to modify the invention of Czakaj to include the teachings of Shyu et al. so that the parking aid can control the speed as well as steering.

.

28. Regarding claim 29, Czakaj does not particularly disclose the details of speed control.

Shyu et al. teach that when parking in a parking space, the speed of the vehicle is controlled by additional intervention into an engine torque of a drive engine of the vehicle as a function of the position of the brake pedal (accelerator actuator 44 and brake actuator 45 used to "appropriately control the output of the engine", Col. 8 line 49 – col. 9, line 11).

It would have been obvious to one of ordinary skill at the time the invention was made to modify the invention of Czakaj to include the teachings of Shyu et al. so that the parking aid can control the speed as well as steering.

29. Regarding claim 30, Czakaj does not particularly disclose the details of speed control.

Shyu et al. teach when maneuvering into a parking space, the speed of the vehicle is controlled by additional intervention into the engine torque of the drive engine

of the vehicle and by automatic gear-shifting of the vehicle transmission as a function of the position of the brake pedal (microprocessor 1, transmission actuator 42, clutch actuator 43, Col. 8 line 49 – col. 9, line 11).

It would have been obvious to one of ordinary skill at the time the invention was made to modify the invention of Czakaj to include the teachings of Shyu et al. so that the parking aid can control the speed as well as steering.

30. Regarding claim 31, Czakaj does not particularly disclose the details of automatic braking.

Shyu et al. teach when an end of the parking space is detected, the vehicle is automatically braked on reaching the end or shortly before reaching the end of the parking space (brake actuator 45, Col. 8 line 49 – col. 9, line 11).

It would have been obvious to one of ordinary skill at the time the invention was made to modify the invention of Czakaj to include the teachings of Shyu et al. so that the parking aid can control braking as well as steering.

Conclusion

31. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew Lichti whose telephone number is (571) 270-

5374. The examiner can normally be reached on Monday - Friday 8:30 AM - 5:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on (571)272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. L./
Examiner, Art Unit 3663

/Jack W. Keith/

Supervisory Patent Examiner, Art Unit 3663